EMERSON & CUMING MICROWAVE PRODUCTS

RoHS Compliant

ECCOSORB® MCS

Thin, Flexible, Broadband Absorbers

Material Characteristics

- Thin, flexible, high-loss, magnetically loaded, electrically non-conductive silicone rubber sheet
- Frequency range from 800 MHz to 18 GHz
- Impervious to moisture and can be subjected to outdoor environments and high altitudes, including space, with no adverse effects
- Low out-gassing properties for space applications
- Can be cut and fitted to compound curves

Applications

- When placed within a cavity ECCOSORB® MCS has proven to be very effective at dampening resonances due to the absorbers high permittivity and permeability as well as high loss values, which in turn reduces the overall VSWR
- ECCOSORB® MCS is designed for the suppression of surface currents over a wide range of frequencies
- Useful for the suppression of creeping waves and reduction of cavity resonances in microwave modules.
- ECCOSORB® MCS is also useful in reducing RF coupling of antennas and microwave components

Availability

- ECCOSORB® MCS is available in sheets 0.040" x 12" x 12" (0.101cm x 30.5cm x 30.5cm)
- Upon special request, ECCOSORB® MCS can be supplied in sheets up to 36" (914.4mm) in length
- It can be supplied with a Pressure Sensitive Adhesive (PSA). Product designation denoting ECCOSORB® MCS with a PSA is ECCOSORB® MCS/SS6M
- ECCOSORB® MCS is available in other sizes and customer specified configurations and thicknesses upon request

Instructions for Use

- ECCOSORB® MCS can be bonded to itself to make thicker sheets or to other substrates with either the factory installed PSA (SS6M), or STYCAST® 4952 along with Primer S-11

Typical Properties

Service Temperature, °F (°C)	Cryogenic to 350 (177)
Volume Resistivity	2 x 10^8 ohm-cm
Relative Impedance	0.66 - 0.23
Dielectric Strength, volts/mil	>20
Nominal Thickness, inches (mm)	.040 (1.0)
Nominal Weight, lb/ft^2 (kg/m^2)	0.95 (4.6)
Hardness, Shore A	>80
Tensile Strength, psi	>500
Elongation, %	>20
Thermal Conductivity, (cal)(cm)/(sec)(cm^2)(°C) (BTU)(in)/(hr)(ft^2)(°F)	 0.0028 8.5
Fire Retardancy	UL-94 V1
%TML (with SS6M)	0.3 (0.23)
%CVCM (with SS6M)	0.05 (0.05)
Weight, lb/ft^2 (kg/m^2)	0.9 (4.39)
Weight, lb/ft^2 (kg/m^2) with SS6M PSA	1.0 (4.87)